# ON SCENE

## THE NATIONAL MARITIME SAR REVIEW

ELT page 5

**DEPARTMENT OF TRANSPORTATION**

**U. S. COAST GUARD**

ISSUE NO. 6-75

# ON SCENE
## THE NATIONAL MARITIME SAR REVIEW

## TESTING OF ELTs AND EPIRBs

Recently it was brought to our attention that field personnel may not be aware of the rules governing the testing of the aeronautical ELTs and the marine EPIRBs and what protection exists to keep the tests from becoming false alarms. This article is the result.

Federal Communications Commission (FCC) rule number 87.93(b) (47 CFR 87.93(b))permits testing of aeronautical ELTs on their operating frequencies of 121.5 and 243 MHz if:

(1) The ELT is fitted with an internal test circuit as prescribed in the rule; or

(2) If the ELT is not fitted with an internal test circuit, either the testing must be done under the control of a Federal Aviation Administration (FAA) representative to insure such conditions that no radiated energy could cause a false alarm, or brief operational tests may be conducted within the first five minutes of any hour but must not be any longer than three audio sweeps --- if the antenna is removable, a dummy load must be substituted during the test.

FCC rule number 87.144(d) (47 CFR 87.144(d))contains similiar provisions for marine EPIRBs with the following differences:

a. EPRIBs without test circuits are permitted to be tested in coordination with, or under the control of the Coast Guard rather than under the control of the FAA, and

b. When the Coast Guard is not involved, the permitted signal in the first five minutes of any hour must be not longer than three audio sweeps or one second, whichever is the longer.

It can be seen from the above that the tests which might cause SAR forces trouble are those operational tests conducted by a pilot or vessel operator to see if his ELT/EPIRB is working. Note that those signals which get through all the protections should be no longer than three audio sweeps or one second and should be within the first 5 minutes of the hour. What this means is that short bursts of ELT/EPIRB transmission reported as heard during the first 5 minutes of the hour, and not heard again, can be pretty well identified as a test transmission. Since it is expected that some persons may not be too precise about staying within the 5 minute requirement, short bursts of ELT/EPIRB signal heard at other times without repetition should create a suspicion of a test transmission outside its normal time frame.

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ON SCENE is a SAR publication published by the Commandant, U. S. Coast Guard as a source of information concerning current and proposed procedures as well as new developments in SAR. Articles contained herein are non-record and non-directive.

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## DON'T DISCOUNT THE SOURCE

An article in a previous issue of On Scene contained the following comment:
"Emergency information received by any means or from any source requires professional evaluation and SAR response." An RCC controller in the Fifth Coast Guard District convincingly demonstrated the truth of this comment recently, when he received a telephone call made by a Mr. Bob NORTON, calling from Heber Springs, Arkansas. Mr. NORTON had heard a Mayday report on Channel 4, citizen's band radio concerning a distress case in Chesapeake Bay. The report concerned a sinking 18 foot outboard with two people on board.

The RCC controller alerted NAS, Patuxent River, and dispatched the CGC Point Highland, the CG 30510, and the Coast Guard Auxiliary vessel SHIRLEY. NAS Patuxent River diverted a flight of 3 F4's and launched an HH46 to search. One of the F4s located the sinking vessel, and the HH46 picked up the two people, returning them to NAS Patuxent River, only 47 minutes after their distress call. The two cutters and the SHIRLEY refloated the 18 foot outboard and towed it to Crisfield, Maryland.

It took a little faith, both on the part of Mr. NORTON and the RCC controller, to believe that a low-powered line of sight CB transmission from Chesapeake Bay would be heard in Arkansas. But they did believe, they did take positive action, and as a consequence two lives were saved.

Lest some CB buff should feel that this incident firmly establishes the citizen's band radio as a reliable emergency signalling device, consider the following:

(a) No one within the normal CB range (line of sight) reported the distress call.

(b) The only CB listener that did report the call was in Arkansas, over 700 miles away. CB's tendency to "skip" was responsible for this distant reception.

In short, Lady Luck plus the good sense shown by Mr. NORTON and the RCC controller saved the day. Of course the CB radio was certainly better than nothing, and in this particular case it did work, however fortuitously. Nevertheless, as an emergency means of indicating distress, CB radio leaves much to be desired.

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## ENTRAPMENT UNDER OVERTURNED HULLS

In two separate incidents over the past several months crewmen have been caught in air pockets under the hulls of their overturned vessels and survived to tell the tale. Last December, two men were trapped for three hours, and last May, four men were trapped for two hours.

No injuries or long-lasting ill effects resulted from these experiences. In spite of some diesel fumes, the air was breathable throughout the ordeals. Communications were maintained by shouting, banging on the hull, and by means of divers. In the first case, the intended rescue technique was to beach the boat and cut through the hull. However, upon beaching, the boat righted and the men escaped. In the second case, divers entered the spaces and removed the survivors.

These two cases clearly demonstrate the survivability of entrapped persons in overturned boats. If readers have any other sea stories to swap on this subject, please mail them in.

# Do you have questions concerning SAR? If so...

# "ASK ALBERT"

Do you have a question concerning SAR? If so, then "Ask Albert." This is a SAR question and answer column, prepared by the staff of the National Search and Rescue School. If you have a question concerning SAR procedures, techniques, operations, organization, or administration, then address your question to: ALBERT ALBATROSS, National Search and Rescue School, Governors Island, New York, N.Y. 10004

AN OPEN LETTER TO ON-SCENE READERS FROM ALBERT

Not too long ago (before the money crunch hit our printing budget) an avid reader wrote a "Where's Albert?" letter. Would you believe that that is the only intelligent question that anyone has asked me in over a year? I have not, as many of you might have assumed, been TAD back at Midway for all this time! I have been right here at my assigned post at the National SAR School waiting for the cards and letters to pour in. Since the number of "Ask Albert" questions that I have recently received has been underwhelming, I can only guess that I have recently received all the answers. That would be nice if it were true. It got so bad that for a while I had to think up my own dumb questions and provide smart answers for them just to fill up space, but I soon knocked off that feather-ruffling procedure.

But, in spite of a lack of activity in my primary duty, I have been kept busy with collateral tasks. I dropped some good ideas on the heads of the troops here at SAR School and, through some well-timed squawking, got them to modify the school's curriculum to give the students more practical training in SAR planning, in addition to the song and dance routines in the classroom.

Now, my traditional roost has its own Rescue Coordination Center and its own ship's chart room, both complete with the necessary communications and plotting facilities to conduct SAR exercises. Future controllers and on-scene Commanders can, in simulation, actually put into practice the theory and procedures learned in the classroom. They are required to make "life or death" decisions under real-time pressures, just like for real.

That's all behind me. Now I'm perched here waiting to answer your questions. If you have a SAR problem you are having difficulty with, you need an interpretation

**Cont...on page 9**

# EPIRB SEARCHES

The carrying of EPIRBs (Emergency Position Indicating Radio Beacons) has been made mandatory for certain inspected U. S. vessels in ocean and coastwise service. Moreover, although the regulations do not apply to uninspected commercial vessels or boats, the Coast Guard encourages such vessels and boats to carry EPIRBs as part of their lifesaving equipment when operating beyond the range of marine VHF radio distress coverage (more than 20 nautical miles offshore). We can expect EPIRBs to play an increasing role in overwater SAR as their use becomes more widespread.

Although the EPIRB has great potential for enhancing our success in SAR missions, search crews may be disappointed in its performance the first time they encounter it. It is natural to expect that a VHF/DF-equipped aircraft should be able to pick up an EPIRB signal, flip on the VHF/DF to "ADF" position, and fly directly to the target. Unfortunately, this seldom happens. Although aural ranges are satisfactory for SAR purposes (commonly 50 to 80 miles at sufficiently high altitude) the ADF may not function until within close range of the target. Consequently, aural (receiver only) homing techniques must often be employed to bring the search craft within ADF range.

How come? We're used to "homing in" with our VHF/DFs on other aircraft, ground stations, and datum marker buoys (DMBs) from very respectable distances. The answer lies in the low signal power of the EPIRB. A minimum of 75 milliwatts (.075 watts) for 48 hours is specified for EPIRBs and Emergency Locator Transmitters (ELT)--the aeronautical counter part of the marine EPIRB. Normally, commercial models will not exceed this minimum by much. If owners are not alert, weak batteries may reduce this power even further. Contrast this with the power output of the VHF transmitters on other military aircraft (typically 30 watts or 400 times EPIRB power), or ground stations (approximately 5 to 50 watts), or even DMBs (1/2 watt or 6.7 times EPIRB power. When it comes to power, the EPIRB is very low on the totem pole.

All is not in vain, however. As stated above, the aural signal reception distance is quite respectable, if your altitude is high enough for line of sight reception. The aircraft commander may have to override the squelch, but if he uses aural homing techniques coupled with reports from other aircraft, adequate search altitude and some common sense, the EPIRB will come through for him. This was borne out last July when two overdue sailing vessels, one in the Atlantic and one in the Pacific, were located by the use of EPIRBs.

On July 26th New York OAC relayed reports from several overseas flights of "ELT" transmissions in the vicinity of the Denis and Felix intersections in the approximate position of 35-15N and 70-45W. An HC-130 was launched from CG Air Station Elizabeth City. When the aircraft arrived in the reported area a weak signal on 121.5 MHz was heard. Using aural homing techniques, the C-130 located the source of the signal, the S/V BANJO, 2 hours and 20 minutes later. The initial range at which the signal was heard was estimated to have been 70 miles but the ARA-25 DF needle was unable to point towards the EPIRB until the aircraft was approximately 10 miles from the target.

The BANJO had suffered severe structural damage in a storm and was taking on water faster than the hand pump could discharge it. Except for the EPIRB, she was without any communications capability. She was unable to maneuver because of rudder damage. The C-130 dropped a pump to her which she placed in

operation. The New York bound Dutch tanker SS VEENDAM (located by AMVER) and the CGC CHILULA proceeded to assist. The VEENDAM arrived on scene first and removed the three survivors from the BANJO. The C-130 dropped a DMB alongside the BANJO and departed the scene. The S/V could not be towed at the normal speed of the VEENDAM because of its damage, and so was left floating with the pump running. However, the pump's fuel supply was only 3 hours and the CHILULA was still 20 hours away. The owner on board the VEENDAM believed that the BANJO would remain afloat until arrival of the CHILULA, but unfortunately, such was not the case. On the following day, when the CHILULA arrived on scene with the aid of the DMB and another C-130, only debris from the BANJO remained. A debrief of the owner (one of the survivors), revealed that the EPIRB's signal was first heard by a passing aircraft approximately 1 1/2 hours after the signal was activated! Undoubtedly this device saved the lives of the BANJO's crew.

Three days later, in the Pacific, another sailing vessel, the COLUMBIA, lost her rudder and was unable to proceed. She had no communications capability except an EPIRB. The crew activated the EPIRB by first putting it in the water alongside and then placing the EPIRB in a bucket of water on deck. Approximately ten hours later at 1200 noon of July 29th, Western Airlines flight 551, inbound to Honolulu, reported hearint an EPIRB/ELT signal on 121.5 MHz. An HC-130 was dispatched from CG Air Station Barbers Point to investigate. The C-130 flew outbound, reversing the route followed by the inbound Western flight making the report. The initial search was conducted at flight level 190. The aircraft commander proceeded towards the point of reported maximum signal strength. He set his VHF receiver volume to maximum and disabled the squelch. He picked up the signal at Cutle intersection, and commenced an HSA aural search pattern. The EPIRB signal strength was insufficient to activate the ARA-25 DF needle at this distance. He flew this outbound track until the signal was lost. On this outbound leg communications were established with a United Airlines flight flying a parallel course approximately 100 miles to the north This aircraft was unable to hear the EPIRB signal. Utilizing this information the AC turned towards the south instead of the north for the next leg of the pattern. Furthur along in the aural pattern the VHF/DF needle moved in such a way as to indicate that it was homing on a signal. The C-130 followed the needle and descended from FL-190 to below cloud level (1500 feet) to investigate the signal source. After approximately 10 minutes of this, the aircraft commander decided that the homing information was erroneous and elected to perform a second HSA pattern. This pattern was successful in locating the S/V COLUMBIA at 1545W, but the boat was sighted visually before positive DF homing could be established. The DF needle didn't point towards the EPIRB until the distance away had closed to only 8 miles.

After initial location of the COLUMBIA the M/V NEW ZEALAND BEAR was diverted to the scene, arriving at 1900W. The master ascertained that the COLUMBIA's problem was the lost rudder and that she requested a tow to Hilo. He then advised the COLUMBIA to secure the EPIRB for the night and turn it on again the following morning. The C-130 dropped a DMB alongside the COLUMBIA and both the C-130 and the NEW ZEALAND BEAR departed the scene at approximately 1940W. The CGC Cape Small was then dispatched to make the tow with an estimated time en route of just over 13 hours.

The following morning, July 30th another C-130 was dispatched from Barbers Point to relocate the COLUMBIA and effect the rendezvous with the Cape Small. This situa-

tion afforded a direct comparison of the EPIRB with the DMB, since both were transmitting in the vicinity of the COLUMBIA. DF capability on the EPIRB signal was no better than it was on the preceding day, but the ARA-25 was able to home on the DMB from approximately 40 miles out. The COLUMBIA was near by and the rendezvous with the Cape Small was easily made, followed by a routine tow of the COLUMBIA to Hilo.

The EPIRB turned out to be a type rated at 225 milliwatts, well above the specified 75 milliwatt minimum but still less than half of the 550 milliwatt rating of the DMB. Its poor performance as compared to the DMB suggests that its effective power output was even lower. The cause may have been weak batteries or possibly excessive shielding from the metal bucket from which it was operating. Whatever the cause, its aural signal distance far exceeded its DF homing distance.

In spite of the limitations of the EPIRBs in these two cases, it must be recognized that they were the prime elements in the rescues. First of all, they provided the initial alert. Then, in spite of their weak power, they enabled C-130's to locate them using aural techniques. In the case of the BANJO the EPIRB made the difference between life and death. The COLUMBIA's status was not as desperate, but without the EPIRB she too might have eventually found herself in a fatal situation.

It is possible that some day VHF/DF's may appear on the market that can home in on the weak EPIRB signal at a somewhat greater distance than the ARA-25, but this is by no means certain. Meanwhile we must use what we have. In spite of its weak power, the EPIRB is a very valuable SAR tool. To use it, SAR professionals must know its limitations and maintain their skills in aural homing techniques.

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# A SALVAGE ATTEMPT

In a recent SAR case, a 44' MLB struck a rock and was damaged while unsuccessfully attempting to refloat a grounded boat under adverse weather conditions. The occupants of the boat had been removed by an HH-52 helicopter, whose pilot had been designated as On Scene Commander (OSC). The attempt at refloating the boat was directed by the OSC despite the expressed reluctance of the boat coxswain and the Officer in Charge of his home station. The investigation and subsequent reviews concluded generally that the OSC is normally the proper authority to decide whether to attempt to salvage a grounded boat, that the coxswain does have a responsibility for the safety of his boat, and that in this case the coxswain was influenced in his actions by the relative seniority of the OSC and the OSC's insistance on proceeding with an attempt to salvage the boat.

In commenting on this, we would like to add the thought that the OSC, having the authority to make such decision, also has the responsibility to base the decision on the best available facts and professional opinions. The feasibility of attempting to refloat a grounded boat is usually better determined by a person on the surface--and the person who will have to do the job--than by a person in the air. The primary reason for dispatching a helicopter in such a case is to rescue people. Having done this, the helicopter may still serve a useful purpose in assisting the boat in his efforts. However, an airborne OSC should not feel that he is giving up his authority by relying on the professional judgement of the person who is closer to the problem.

# OREGON RESCUE

A combination of courage, co-operation, ingenuity, and skill resulted in a spectacular rescue on the rugged Oregon coast last March. A diver had become stranded in a cave in the face of an overhanging cliff, just above the high water mark. The heavy surf in the rocky waters prevented a rescue by boat and the overhanging cliff prevented a helicopter hoist. The rescue was made by the combined efforts of the Florence, Oregon Police Department; The Lane County Sheriff's Search and Recovery Team; Coast Guard Station, Siuslaw River, Oregon; and Coast Guard Air Station, North Bend, Oregon.

The following narrative was prepared by LT Ted WHITE, co-pilot of the Coast Guard rescue helicopter:

"At 1927, 4 March 1975, the Florence, Oregon police department reported a diver missing in the vicinity of Devils Elbow State Park to Coast Guard Station Siuslaw River. At 1940 BMC EDWARDS, Officer in Charge, departed the station with a mobile unit to search the coast line and requested a helicopter for the search. HH52A 1439, piloted by LT Bud TARDIFF departed and searched with the nite-sun until poor visibility prohibited further search of the shoreline area. The geography of the coastline is a small beach at the State Park with 200-250 ft. cliffs for a mile in either direction of the last reported position of the diver. The searches produced no results that night.

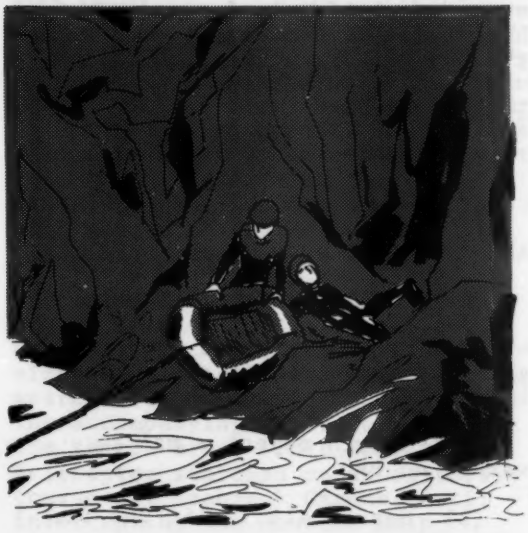
"The ground search party, consisting of Coast Guard and Sheriff's department personnel, arrived on scene again at 0730, 5 March. At 0810 the ground party spotted the diver in a cove just south of the beach at the State Park. The cove was surrounded by cliffs and the diver was stranded in a small cave just above the high water level. Because of the cliffs and the surf, he was inaccessible by any ordinary means of approach, including a helicopter hoist. "HH52A 1439, again piloted by LT TARDIFF, arrived on scene at 0850. He tried twice to blow a one man raft with a line attached in to the diver. Both times the line broke off the raft when it was almost to the diver. A conference was held in the parking lot at the park and it was decided that a member of the Lane County Sheriff's Search and Recovery Team would rappel down the cliff to the diver carrying a wet suit, radio, and life raft (uninflated) from Siuslaw River Station. The plan was that once the rescuer reached the diver, depending on his condition, they would either come back up the cliff or try to go out through the surf.

*Sheriff's Recovery Team man rappelling to cave.*

"The rescuer, Wayne Arrington [Lane County Sheriff's Search and Recovery Team], was successful in reaching the diver at 1130. Meanwhile, the 1439 transported a team with a line throwing gun to a point of land from where they had a clear shot at the cave area. The 1439 then

had to depart scene due to low fuel. HH52A 1373, LCDR Richard GRAHAM, relieved him. The rescuer reported that the diver appeared to be exhausted, suffering from hypothermia and advised against waiting for the ARRS paramedics, which were due on scene in approximately 1 1/2 hours, and against transporting the man up the cliff.

"The line throwing gun team successfully passed a line to the rescuer and one inch Samson line was then passed over. After the rescuer had the line fastened to his raft, himself and the diver, the 1373 moved in and picked the other end of the line from the gun team. The copilot, LT Ted WHITE, and crewman, AD3 Mike KIRK, started pulling the two men through the surf towards the helicopter. A platform pickup had been planned due to the divers poor condition.



*A line-throwing gun was necessary to pass this line to the cave.*

"The pickup itself was made more difficult by the cliffs that were approximately 10 feet in front of the rotor disc and 30 feet behind the helo, and by the surf that was breaking seaward and sometimes underneath the helo. Primarily because of the waves, it took more than 3 minutes for the helo crewmen to get the diver and rescuer aboard, and at one point the rescuer was hanging from the platform five feet in the air. The diver was taken to the Florence Hospital where he was reported in good condition and released that afternoon".

*Platform pick-up of Sheriff's Recovery Team man and victim.*

All hands deserve a hearty "Well Done" on this one!

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**ASK ALBERT...Contd from page 4**

or explanation of some procedure, or maybe you just want to settle a bet, write:

Ask Albert
National SAR School
USCG Training Center
Governors Island
New York, N.Y. 10004

Before signing off I would like to doff my head feathers to the HAIC (Head Albatross in Charge), CAPT. Chuck HATHAWAY, for his super article in On-Scene 4-75. That's just the message I have been trying to put across at the SAR School, only I have never been able to put it so eloquently.

# Hats Off To
# AIR STATION HOUSTON

A search for a man overboard is a tough one anytime. Right? Right! A search for a man overboard at night is impossible. Right? Wrong! The rest of this article is a verbatim excerpt from a SAR Case Narrative report submitted by Commanding Officer, Houston Air Station which reveals an outstanding job of search, location and recovery of a man overboard at night in Galveston Bay. Commander, 8th Coast Guard District commented that this case is an excellent illustration of how a well trained crew performs an assigned search and rescue task. We agree.

BACKGROUND AND PRELIMINARY PHASE

At 2310R, 11 August 1975, Air Station Houston was notified via landline by CG Base Galveston that the pleasure craft PHONY TONY lost a passenger overboard while enroute from Seabrook, Texas to Red Fish Island in Galveston Bay. Personnel aboard the vessel first noticed that the subject, Jimmie STANLEY, a 21 year old male caucasian, was missing at approximately 2210R. The vessel then reversed course from its reported position one-half mile west of Red Fish Island and conducted a trackline search for STANLEY while returning to the point of departure, approximately eight miles to the west. The vessel had no operative radio and upon arrival at Seabrook, a passenger, Mr. KOBOBEL telephoned CG Group Galveston for assistance.

After we were notified of the distress, the ready helicopter was rigged with an SX-16 Nightsun and portable ILC Model MS3000G searchlight. This latter light was retained at the unit following an evaluation period in 1969 and lately has been used to supplement the Nightsun. Before incorporation of H52 AMC 96 (observer seat), the ILC light was mounted in the cabin doorway at the attachment point for the rescue platform's forward cable. In this configuration the light can be trained through an arc of 180° in azimuth and elevation. With the observer seat installed, the ILC light is hand held by the aircrewman. The ready helicopter in this case did not have H52 AMC incorporated.

SEARCH PHASE

HH52A 1459 departed the unit at 2329R. Enroute to the scene the SAR aircrewman tested both lights and the aircraft commander briefed the crew as follows:

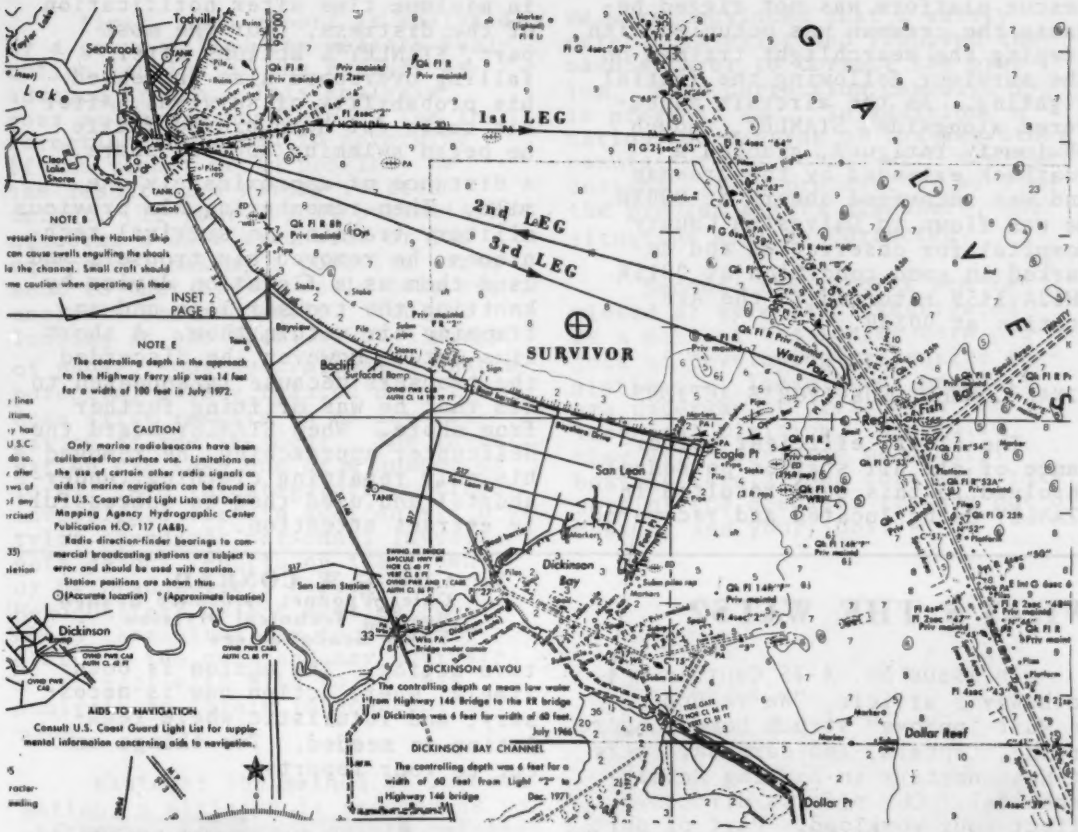
(a) Search object - man in water, no PFD

(b) Search alt. - 150-200 ft.

(c) AC(occupying right seat) - pilot helicopter

(d) CP - operate Nightsun and search 9-12 o'clock sector.

(e) Aircrewman - operate ILC light, search 2-5 o'clock sector, and have MK25 marine marker ready for launching.


1st LEG
2nd LEG
3rd LEG
SURVIVOR
Seabrook
Todville
Lake
Clear Lake Shores
NOTE B
vessels traversing the Houston Ship can cause swells engulfing the shoals to the channel. Small craft should me caution when operating in these
INSET 2 PAGE B
NOTE E
The controlling depth in the approach to the Highway Ferry slip was 14 feet for a width of 100 feet in July 1972.
CAUTION
Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Hydrographic Center Publication H.O. 117 (A&B).
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
(Accurate location) * (Approximate location)
AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.
Bacliff
Surfaced Ramp
Bayview
San Leon
Dickinson Bay
Eagle Pt
West Pass
Red Fish Bar
Dollar Reef
Dollar Pt
Dickinson
DICKINSON BAYOU
The controlling depth at mean low water from Highway 146 Bridge to the RR bridge at Dickinson was 6 feet for width of 60 feet. July 1966
DICKINSON BAY CHANNEL
The controlling depth was 6 feet for a width of 60 feet from Light "2" to Highway 146 bridge
Dec. 1971
GALVESTON

HH52A 1459 arrived on scene at 2335R. Weather consisted of high scattered clouds, visibility 7 miles, wind SSE at 3-5 knots, and 1 foot seas from the SE. Since the vessel's position and course at the time of the incident were unknown, the aircraft commander elected to conduct trackline searches along the probable routes. The accompanying chart depicts the search area. Initially the helicopter searched on an easterly course out Seabrook Channel until intercepting the Houston Ship Channel, thence southeasterly to Red Fish Island. The second leg was flown from the northwest tip of Red Fish Island to Seabrook. While on this leg, information was received indicating that the P/C headed directly for the southwest tip of Red Fish Island after departing Seabrook and the third search leg was aligned accordingly. About halfway along this leg the aircrewman, while sweeping the ILC light forward through the 4 o'clock position, spotted STANLEY in the water at a distance of approximately one hundred yards. The survivor was waving a white article of clothing.

RESCUE PHASE

The aircrewman immediately notified the pilot of his sighting and kept the searchlight trained on STANLEY. The pilot executed a right turn until sighting STANELY, then continued the turn to a heading of 300°M before descending for landing. The slight downwind component was no factor and lights on the shoreline provided adequate visual reference, obviating the need for a beep-to-hover. The helicopter landed at 0004R with STANLEY located just outside the rotor wash, in the 2 o'clock position. The

rescue platform was not rigged because the crewman was occupied with keeping the searchlight trained on the survivor following the initial sighting. As the aircraft maneuvered alongside, STANLEY, though obviously fatigued, grabbed a boathook extended by the crewman and was recovered aboard at 0005R. He was flown to Galveston County Hospital for observation and debarked in good condition at 0015R. HH52A 1459 returned to the Air Station at 0033R.

FINAL COMMENT-SURVIVOR'S ACTIONS

The alert, efficient performance of all air station personnel involved in this case resulted in STANLEY being located and recovered in minimum time after notification of the distress. For the most part, STANLEY's actions after falling overboard also increased his probability of survival. After his calls for help proved futile he began swimming towards shore, a distance of approximately one mile. Then remembering his previous military training in survival techniques, he removed his trousers and used them as a flotation device by knotting the trouser legs and entrapping air within them. A short time later, however, he discarded the trousers because it appeared to him that he was drifting further from shore. When STANLEY heard the helicopter approaching, he removed his only remaining clothing (undershorts) and used them to successfully attract attention.

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# WHAT'S THE WATS?

By **CDR G.W. CONRAD**
**Chief, Product Assurance Branch**
**Boating Technical Division**
**USCG Headquarters**

In issue No. 4-75 Captain Hathaway's article, "We're Good - We Must Improve" struck home. We're trying, Captain, and darn hard here at Headquarters in Boating Safety Technical. Our efforts directly affect your workload. Part of our, and your, effort is the WATS line.

You all should be aware of the WATS line by now, but what it is and how it concerns you may not be so clear.

The WATS is a toll free telephone line, number 800-633-2085. On the other end is a pleasant young lady, Donna. She is employed at Wyle Laboratory, an independent testing facility under contract to us. Her job is to record your accident information provided as required by COMDTNOTE 5100 of 9 June 1975.

Your reports help us learn from your experiences. They allow for timely analysis and action, which the accident reporting system does not. The reports are being used in an attempt to remove from future SAR cases and accident statistics those which can be prevented by positive action on our part. We can, and do, take positive action. The action is both timely, where action now is necessary, and futuristic where regulation is needed. Two things occur to your reports.

*There isn't any comedy on this line*

First, each report is analyzed by a group called the Defects Evaluation Section of the Product Assurance Branch. This analysis goes as far as possible on the information furnished to determine if the report could possibly be the result of a safety related defect. If your report potentially concerns a defective boat or its equipment, making a positive statement to that effect would help our analysis immeasureably. You are looking at the boat; we at a piece of paper. Our determination that a potential safety related defect does exist results in an investigation of the incident. The investigation can take one of a number of forms. MIO investigators routinely investigate certain accidents. District standards personnel investigate defect reports on their own, or by Headquarters direction. Our Headquarters defect section engineers themselves may technically evaluate the case and may activate a contract with WYLE to do this analysis to obtain independent opinion.

Whatever the method of investigation, a decision is reached as to whether we believe a safety related defect exists. If we believe a defect exists we require the manufacturer to conduct owner notification and to correct the problem at the manufacturers sole cost and expense. This program is similar to the recall campaigns conducted by the automobile industry. This type of positive action brings meaningful results in saving lives, preventing injury and damage and, of course, reducing SAR workloads.

A good example of the type of teamwork that can result from the WATS line is happening as I write this article. A fatality was investigated by MIO. They found the death occurred because carbon monoxide in the exhaust of a generator was entering the boats head, apparently because of a design defect. Instead of simply writing the report and waiting for it to complete the paperwork channels to us, they called it in. Within a few days we were convinced that a safety defect did exist and required the manufacturer to correct the problem. This correction campaign is in progress now. In addition, a nationwide program of testing other manufacturer's boats, with similiar designs, is in process. If we find the problem exists elsewhere, the situation will be corrected.

Second, the reports are reviewed at Wyle and investigated as a part of the longer term project of developing preventive regulations. These study projects are underway at present in the Technical Division. Hopefully they will result in meaningful boating regulations that will take some of the needless tragedy out of boating and your jobs.

*Not your routine data collection system*

So you see, Boating Safety is no longer virtually powerless, as it used to be. It is an alive, action orientated group of people who are determined to reduce the tragedy of boating accidents and SAR incidents. We have authority and are using it. We are taking timely action, yet preparing for the future as well. We are trying hard to improve the Coast Guard's impression, just as Captain Hathaway suggests you do. Your knowledge of "Whats the WATS" will help us both achieve our mutual goal.

# EMERGENCY MEDICAL TRAINING FOR BROOKLYN AIRCREWMEN

In March 1974 a Commandant Notice, circulating the SAR study of Eastern Airlines Flight 401 crash in the Everglades, encouraged action on the local level to improve training in emergency medical treatment and first aid. In response to this, a comprehensive training program to provide SAR aircrewmen with Emergency Medical Technician training (EMT) has been underway at Coast Guard Air Station, Brooklyn for some time. The training has been coordinated by LTJG Hugh O'Doherty, USN, who is on duty with the Coast Guard and is the SAR Aircrew Training Officer at Brooklyn Air Station. He is himself a certified EMT.

The EMT course that Brooklyn aircrewmen attended was held at the Emergency Medical Service Training Program of the U. S. Public Health Service Hospital, Staten Island, N. Y. The course was established for all people in the field of emergency medicine and transportation: rescue groups, firemen, policemen, ambulance attendants, emergency room personnel, nurses and physician's assistants. The EMT/ at Brooklyn Air Station are considered to be able to handle almost any medical emergency encountered in a SAR situation in respect to stablizing the patient's condition en route to the hospital. This capability has given Brooklyn Air Station a new dimension in rescue assistance, particularly for those cases where it is not possible to get a doctor or corpsman on scene.

The intensive 81-hour curriculum in basic life support given to the Brooklyn Air Station EMTs was designed by the American College of Surgeons and the Department of Transportation. It was originally prepared for emergency workers responsible for evacuating the injured from highway accidents.

Most of the EMTs at Brooklyn Air Station are engineering personnel whose primary job is to maintain the station aircraft and fly as crewmembers. Lieutenant O'Doherty stated that the motivation of these men is a desire to be better SAR aircrewmen. He also stated that a refresher course is available every three years and that the emergency room of Booth Memorial Hospital has been made available to Brooklyn Air Station EMTs. They can work one 8-hour day per month, providing valuable first hand continuing experience in emergency medical care in order to stay current as EMTs. These EMT/aircrewmen fill their normal slots on the plan of the day, but next to their names is the designation "EMT" so that the senior duty officer and operations duty officer know who their EMTs are. Also, the operations center has a list of EMTs, their phone numbers and the time-distance from home to the station. Thus most missions with a known medical response requirement will have a regularly available EMT-qualified aircrewman on board.

Economically the outstanding training offered by the EMT course was about as good as you can get. The course was offered at no cost except for books ($7.50). The real expense was transportation to the school and the lost time of the aircrewmen at the station. However, the Commanding Officer of the Air Station and the Third District Commander consider the increase in capability worth the effort.

Information on the availability of EMT courses in other areas is being compiled and will be published separately.

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